

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 08339816  
PUBLICATION DATE : 24-12-96

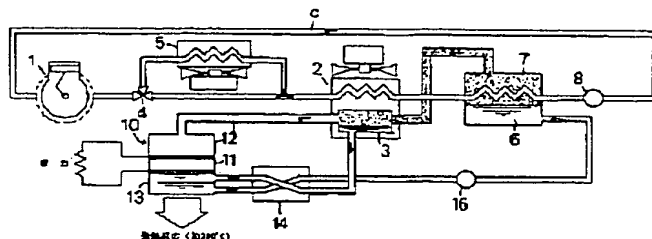
APPLICATION DATE : 09-06-95  
APPLICATION NUMBER : 07168095

APPLICANT : AISIN AW CO LTD;

INVENTOR : FURUTA AKIKO;

INT.CL. : H01M 8/06 C01B 3/26 F02G 5/00

TITLE : POWER GENERATION DEVICE FOR  
AUTOMOBILE



ABSTRACT : PURPOSE: To provide a small size power generation device for an automobile which can be used as an auxiliary power source for an electrical apparatus and the like by utilizing waste heat of engine cooling water as a heat source of a hydrogen generator, and arranging a hydrogen separator in a radiator so as to cool mixed gas.

CONSTITUTION: Cooling water heated to a high temperature by rotation of an engine 1 is introduced into a radiator 2, and is heat-exchanged so as to be cooled to about 80 to 85°C. This cooling water passes a hydrogen generator 7 and is force-fed to the engine 1 by a cooling water pump 8. Liquid fuel contained in the hydrogen generator 7 is heated by heat exchange with the cooling water after passing the radiator 2 (about 80 to 85°C) so as to obtain the mixed gas of the liquid fuel. The mixed gas is sent to a tank 3 functioning as a hydrogen separator in the radiator 2 so as to be separated to hydrogen gas and the liquid fuel. The separated hydrogen gas is fed to a hydrogen electrode 12 of a fuel cell 10 in a pressurized state. The liquid fuel rises close to the operating temperature of the fuel cell 10 via a heat exchanger 14, and is fed to the benzene electrode 13 of the fuel cell 10.

COPYRIGHT: (C)1996,JPO